

JP920000220US1

Application No.: 09/666,230  
Filing Date: 09/21/2000IN THE CLAIMS

Please enter amendments as follows:

1. (currently amended) In a computing system, a method to intelligently handle a large volume of e-mails ~~e-mail received from a plurality of senders intelligently, by automatically processing each email based on a pre-determined classification system and stored information;~~ said method comprising the steps of:
  - ~~receiving and sending the electronic e-mails;~~
  - sending e-mail responses to ones of the received e-mails;
  - ~~parsing the electronic mail headers of the e-mails to capture keywords for the purpose of identifying the senders and; the subjects and specific key words and/or phrases;~~
  - ~~parsing the electronic mail body bodies of the e-mails; including attachments if any, for keywords and/or phrases for purpose of~~
  - parsing keywords of the e-mails;
  - categorizing the e-mails in response to the parsing of the e-mail bodies, wherein the categorizing includes identifying when reply templates are to be prepared for responses to respective ones of the e-mails, the reply templates being for completion by a user preparing the responses to the e-mails;
  - storing the said received e-mails and parsed senders, subjects and keywords in a personalized e-mail database (PED);
  - ~~analyzing the emails stored in the PED for identifying co-relations among received e-mails using an expert system (ES) with machine learning capabilities to assist the user in analyzing and preparing replies;~~
  - preparing a the reply templates using a reply template generator (RTG), including the step of:
    - analyzing the e-mails senders, subjects and keywords stored in the PED using an expert system (ES) with machine learning capabilities to extract certain content of the e-mails, wherein such extracted content is included in ones of the reply templates;
  - storing the email responses replies in said PED; and

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- configuring said PED and said ES using an personalized email database configurator (PEC) for updation.
2. (currently amended) A method as claimed in claim 1, wherein the step of storing the received e-mails and parsed senders, subjects and keywords further comprises:
- storing ~~of the received and sent e-mails~~ in a mailbox (MB) within said PED; ~~and~~
  - storing the parsed senders, subjects and keywords ~~result of the analysis by said expert system in a New Knowledge Base (NKB) in the said PED.~~
3. (canceled)
4. (canceled)
5. (canceled)
6. (currently amended) A method as claimed in claim 1, wherein the step of analyzing the e-mails and senders, subjects and keywords stored in the PED further comprises the step of:
- ~~optionally generating the reply template;~~
  - ~~selecting mail type on which to generate reply template e.g. one-liner, short, medium long replies;~~
  - ~~enabling/disabling history search and intelligent reply template generation for specific type of mails for short mails;~~
  - ~~enabling/disabling history search and intelligent reply template generation for specific type of mails for cc'ed type or bcc'ed type of mails sent to newsgroups;~~
  - ~~specifying history search and intelligent reply template generation parameters like:~~
    - ~~whether to search on subject and/or sender;~~
    - ~~time period in which the messages need to be searched for;~~
  - selecting certain types of message the contents of the e-mails to be included/excluded in the reply templates;
  - ~~scheduling deletion of mails from the MB and NKB;~~

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- ~~scheduling sending of mails;~~
- ~~specifying latest first or oldest first while generating relevant intelligent reply;~~
- ~~specifying limits on inclusion of older reply contents — time period wise, volume wise and bandwidth wise;~~
- ~~specifying criteria for inclusion/exclusion of keywords;~~
- ~~providing access to multiple PED's at various locations over the network;~~
- ~~providing on-the-fly exclusion / inclusion of original mail and reply contents including the various levels of replies and counter-replies by the user through said PEC.~~

7. (canceled)

8. (currently amended) A method as claimed in claim 1 further including ~~displaying of: the steps of:~~

- categorizing the received and sent e-mails in categories including: i) initial e-mails received (e-mails R1), ii) e-mail responses sent for e-mails R1 (e-mails S1), iii) e-mails received in reply to e-mails S1 (e-mails R2), iv) e-mail responses sent for e-mails R2 (e-mails S2) and v) e-mails received in reply to e-mails S2 (e-mails R3);  
and
  - ~~the mail received R1,~~
  - ~~reply sent to R1 — S1,~~
  - ~~reply received on S1 — R2,~~
  - ~~reply sent to R2 — S2,~~
  - ~~reply received on S2 — R3 ...~~
- displaying the e-mails to the user by said RTG, serially and in chronological sequence, individually or in groups of R1, R2, R3 or S1, S2, S3 or in any in combinations of the categories of the e-mails R1, R2, R3, S1, S2 and S3 requested by the user, wherein the e-mails are displayed so that the categories of the e-mails are distinguishable by distinctive appearances, either in configurable colors and/or with changed font type and size.

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9. (canceled)

10. (currently amended) A method as claimed in claim 1 wherein said reply template for one of the received e-mails is in a the same format in which as an said attachments of the e-mail have been received.

11. (canceled)

12. (currently amended) A method as claimed in claim 1 further including searching the said PED by said ES for co-relations amongst the e-mails received, wherein the co-relations are determined responsive to at least one of the following: senders of the e-mails, subjects of the e-mails and keywords of the e-mails.

- ~~sender wise;~~
- ~~senders within a particular timeframe;~~
- ~~thread wise or subject wise;~~
- ~~sender and subject wise;~~
- ~~sender, subject and date wise;~~
- ~~sender, keyword wise.~~

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13. (currently amended) In a computing system, a system to intelligently handle large volume of e-mails received from a plurality of senders intelligently, by automatically processing each email based on a pre-determined classification system and stored information, comprising:

- means for receiving and sending the electronic e-mails;
- means for sending e-mail responses to ones of the received e-mails;
- means for parsing the electronic mail headers of the e-mails to capture keywords for the purpose of identifying the senders and, the subjects and specific key words and/or phrases;
- means for parsing the electronic mail body bodies of the e-mails; including attachments if any, for keywords and/or phrases for purpose of
- means for parsing keywords of the e-mails;
- means for categorizing the e-mails in response to the parsing of the e-mail bodies, wherein the means for categorizing includes means for identifying when reply templates are to be prepared for responses to respective ones of the e-mails, the reply templates being for completion by a user preparing the responses to the e-mails;
- means for storing the said received e-mails and parsed senders, subjects and keywords in a personalized e-mail database (PED);
- means for analyzing the emails stored in the PED for identifying co-relations among received emails using an expert system (ES) with machine learning capabilities to assist the user in analyzing and preparing replies;
- means for preparing at the reply templates using a reply template generator (RTG), including:
  - means for analyzing the e-mails senders, subjects and keywords stored in the PED using an expert system (ES) with machine learning capabilities to extract certain content of the e-mails, wherein such extracted content is included in ones of the reply templates;
- means for storing the email responses replies in said PED; and
- means for configuring said PED and said ES using an personalized email database configurator (PEC) for updation.

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14. (currently amended) A system as claimed in claim 13, wherein the means for storing the received e-mails and parsed senders, subjects and keywords further comprises:

- means for storing the received ~~and sent~~ e-mails in a mailbox (MB) within said PED;  
and;
- means for storing the parsed senders, subjects and keywords ~~result of the analysis by said expert system~~ in a New Knowledge Base (NKB) in the ~~said~~ PED.

15. (canceled)

16. (canceled)

17. (canceled)

18. (currently amended) A system as claimed in claim 13, wherein the means for analyzing the e-mails and senders, subjects and keywords stored in the PED comprises: ~~further comprising means for allowing the user through said PEC to:~~

- ~~optionally generate the reply template;~~
- ~~select mail type on which to generate reply template e.g. one-liner, short, medium long replies;~~
- ~~enable/disable history search and intelligent reply template generation for specific type of mails for short mails;~~
- ~~enable/disable history search and intelligent reply template generation for specific type of mails for ce'ed type or bee'ed type or mails sent to newsgroups;~~
- ~~specify history search and intelligent reply template generation parameters like;~~
  - ~~whether to search on subject and/or sender;~~
  - ~~time period in which the messages need to be searched for;~~
- means for selecting certain types of message the contents of the e-mails to be included/excluded in the reply templates;
- ~~schedule deletion of mails from the MB and NKB;~~
- ~~schedule sending of mails;~~

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- ~~specify latest first or oldest first while generating relevant intelligent reply;~~
- ~~specify limits on inclusion of older reply contents — time period wise, volume wise and bandwidth wise;~~
- ~~specify criteria for inclusion/exclusion of keywords;~~
- ~~provide access to multiple PEDs at various locations over the network;~~
- ~~provide on-the-fly exclusion / inclusion of original mail and reply contents including the various levels of replies and counter-replies;~~

19. (canceled)

20. (currently amended) A system as claimed in claim 13 further comprising means for displaying:

- means for categorizing the received and sent e-mails in categories including: i) initial e-mails received (e-mails R1), ii) e-mail responses sent for e-mails R1 (e-mails S1), iii) e-mails received in reply to e-mails S1 (e-mails R2), iv) e-mail responses sent for e-mails R2 (e-mails S2) and iv) e-mails received in reply to e-mails S2 (e-mails R3);  
and
- ~~the mail received R1;~~
- ~~reply sent to R1 — S1;~~
- ~~reply received on S1 — R2;~~
- ~~reply sent to R2 — S2;~~
- ~~reply received on S2 — R3 ...~~
- means for displaying the e-mails to the user by said RTG, serially and in chronological sequence, individually or in groups of R1, R2, R3 or S1, S2, S3 or in any combinations of the categories of the e-mails R1, R2, R3, S1, S2 and S3 requested by the user, wherein the e-mails are displayed so that the categories of the e-mails are distinguishable by distinctive appearances, either in configurable colors and/or with changed font type and size.

21. (canceled)

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22. (canceled)

23. (currently amended) A system as claimed in claim 13 further including means for searching ~~thesaid~~ PED by said ES for co-relations amongst e-mails received, wherein the co-relations are determined responsive to at least one of the following: senders of the e-mails, subjects of the e-mails and keywords of the e-mails.

- ~~sender wise;~~
- ~~senders within a particular timeframe;~~
- ~~thread wise or subject wise;~~
- ~~sender and subject wise;~~
- ~~sender, subject and date wise;~~
- ~~sender, keyword wise.~~



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24. (currently amended) A computer program product comprising computer readable program code stored on computer readable storage medium embodied therein for causing a computer to intelligently handle large volume of e-mails received from a plurality of senders ~~intelligently~~, said computer program product comprising:

- computer readable program code means configured for receiving ~~and sending the electronic mail/e-mails;~~
- computer readable program code means configured for sending e-mail responses to ones of the received e-mails;
- computer readable program code means configured for parsing ~~the electronic mail headers of the e-mails to capture keywords for the purpose of identifying the senders, and the subjects and specific key words and/or phrases;~~
- computer readable program code means configured for parsing ~~the electronic mail body/bodies of the e-mails; including attachments if any, for keywords and/or phrases for purpose of~~
- computer readable program code means configured for parsing keywords of the e-mails;
- computer readable program code means configured for categorizing the e-mails in response to the parsing of the e-mail bodies, wherein the categorizing includes identifying when reply templates are to be prepared for responses to respective ones of the e-mails, the reply templates being for completion by a user preparing the responses to the e-mails;
- computer readable program code means configured for storing the ~~said received e-mails and parsed senders, subjects and keywords~~ in a personalized e-mail database (PED);
- ~~computer readable program code means configured for analyzing the emails stored in the PED for identifying co-relations among received emails using an expert system (ES) with machine learning capabilities to assist the user in analyzing and preparing replies;~~
- computer readable program code means configured for preparing ~~the~~ reply templates using a reply template generator (RTG), including:

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computer readable program code means configured for analyzing the e-mails senders, subjects and keywords stored in the PED using an expert system (ES) with machine learning capabilities to extract certain content of the e-mails, wherein such extracted content is included in ones of the reply templates:

- computer readable program code means configured for storing the email responses replies in said PED; and;
- computer readable program code means for configuring said PED and said ES using an personalized email database configurator (PEC) for updation.

25. (currently amended) A computer program product as claimed in claim 24, wherein computer readable program code means configured for storing the received e-mails and parsed senders, subjects and keywords further comprising:

- computer readable program code means configured for storing ~~of the received and sent e-mails~~ in a mailbox (MB) within said PED; and;
- computer readable program code means configured for storing the parsed senders, subjects and keywords ~~result of the analysis by said expert system in a New~~ Knowledge Base (NKB) in the said PED.

26. (canceled)

27. (canceled)

28. (canceled)

29. (currently amended) A computer program product as claimed in claim 24, wherein the computer readable program code means configured for analyzing the e-mails and senders, subjects and keywords stored in the PED further comprising: ~~computer readable program code means configured for allowing the user through said PEC to:~~

- ~~optionally generate the reply template;~~

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- ~~select mail type on which to generate reply template e.g. one liner, short, medium long replies;~~
- ~~enable/disable history search and intelligent reply template generation for specific type of mails for short mails;~~
- ~~enable/disable history search and intelligent reply template generation for specific type of mails for cc'ed type or bcc'ed type or mails sent to newsgroups;~~
- ~~specify history search and intelligent reply template generation parameters like;~~
  - ~~whether to search on subject and/or sender;~~
  - ~~time period in which the messages need to be searched for;~~
- computer readable program code means configured for selecting certain types of message the contents of the e-mails to be included/excluded in the reply templates;
- ~~schedule deletion of mails from the MB and NKB;~~
- ~~schedule sending of mails;~~
- ~~specify latest first or oldest first while generating relevant intelligent reply;~~
- ~~specify limits on inclusion of older reply contents — time period wise, volume wise and bandwidth wise;~~
- ~~specify criteria for inclusion/exclusion of keywords;~~
- ~~provide access to multiple PEDs at various locations over the network;~~
- ~~provide on-the-fly exclusion / inclusion of original mail and reply contents including the various levels of replies and counter-replies.~~

30. (canceled)

31. (currently amended) A computer program product as claimed in claim 24: further including: ~~computer readable program code means configured for displaying of:~~

- computer readable program code means configured for categorizing the received and sent e-mails in categories including: i) initial e-mails received (e-mails R1), ii) e-mail responses sent for e-mails R1 (e-mails S1), iii) e-mails received in reply to e-mails S1 (e-mails R2), iv) e-mail responses sent for e-mails R2 (e-mails S2) and v) e-mails received in reply to e-mails S2 (e-mails R3); and

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- ~~the mail received R1~~
- ~~reply sent to R1 S1~~
- ~~reply received on S1 R2~~
- ~~reply sent to R2 S2~~
- ~~reply received on S2 R3 ...~~
- computer readable program code means configured for displaying the e-mails to the user by said RTG, serially and in chronological sequence, individually or in groups of R1, R2, R3 or S1, S2, S3 or in any in combinations of the categories of the e-mails R1, R2, R3, S1, S2 and S3 requested by the user, wherein the e-mails are displayed so that the categories of the e-mails are distinguishable by distinctive appearances, either in configurable colors and/or with changed font type and size.

32. (canceled)

33. (canceled)

34. (currently amended) A computer program product as claimed in claim 24 further including computer readable program code means configured for searching the ~~said~~ PED by said ES for co-relations amongst the e-mails received, wherein the co-relations are determined responsive to at least one of the following: senders of the e-mails, subjects of the e-mails and keywords of the e-mails.

- ~~sender wise;~~
- ~~senders within a particular timeframe;~~
- ~~thread wise or subject wise;~~
- ~~sender and subject wise;~~
- ~~sender, subject and date wise;~~
- ~~sender, keyword wise.~~

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35. (new) A method as claimed in claim 1, wherein the identifying when to prepare reply templates includes, for such a one of the reply templates, selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to whether one of the received e-mails specifies a Cc address.

36. (new) A method as claimed in claim 1, wherein the identifying when to prepare reply templates includes, for such a one of the reply templates, selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to a length of one of the received e-mails.

37. (new) A method as claimed in claim 1, wherein the categorizing of the e-mails includes identifying lengths of the e-mails, and the analyzing to extract certain content of the e-mails is responsive to the lengths.

38. (new) A method as claimed in claim 6, wherein for the step of selecting certain types of the contents of the e-mails to be included in the reply templates, the selecting being responsive to ages of the e-mails.

39. (new) A system as claimed in claim 13, wherein the means for identifying when to prepare reply templates includes, for such a one of the reply templates, means for selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to whether one of the received e-mails specifies a Cc address.

40. (new) A system as claimed in claim 13, wherein the means for identifying when to prepare reply templates includes, for such a one of the reply templates, means for selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to a length of one of the received e-mails.

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41. (new) A system as claimed in claim 13, wherein the means for categorizing of the e-mails includes means for identifying lengths of the e-mails, and the means for analyzing to extract certain content of the e-mails is responsive to the lengths.
42. (new) A system as claimed in claim 18, wherein for the means for selecting certain types of the contents of the e-mails to be included in the reply templates, the selecting being responsive to ages of the e-mails.
43. (new) A computer program product as claimed in claim 24, wherein the identifying when to prepare reply templates includes, for such a one of the reply templates, selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to whether one of the received e-mails specifies a Cc address.
44. (new) A computer program product as claimed in claim 24, wherein the identifying when to prepare reply templates includes, for such a one of the reply templates, selecting among i) preparing the reply template immediately, ii) preparing the reply template at some future time, and iii) not preparing the reply template, the selecting being responsive to a length of one of the received e-mails.
45. (new) A computer program product as claimed in claim 24, wherein the categorizing of the e-mails includes identifying lengths of the e-mails, and the analyzing to extract certain content of the e-mails is responsive to the lengths.
46. (new) A computer program product as claimed in claim 29, wherein for the computer readable program code means configured for selecting certain types of the contents of the e-mails to be included in the reply templates, the selecting being responsive to ages of the e-mails.